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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,222	01/12/2001	John R. Liddicoat	VIA-14	1731
7590 05/06/2004			EXAMINER	
Pandiscio & Pandiscio 470 Totten Pond Road Waltham, MA 02451-1914			MATTHEWS, WILLIAM H	
			ART UNIT	PAPER NUMBER
			3738	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/760,222	Applicant(s) LIDDICOAT ET AL.	
	Examiner William H. Matthews (Howie)	Art Unit 3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-17 and 28 have been considered but are moot in view of the new ground(s) of rejection.

2. With respect to Loch et al., the Examiner does not understand why Applicant believes Loch does not constitute prior art under 102(e). First, Loch is being applied under 35 U.S.C 103. Second, 35 U.S.C. 102(e) states:

a. the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Northrup, III US PN 5,709,695.

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5. Northrup, III discloses in figures 6-7, lines 10-16 of col. 6, and lines 15-20 of col. 7 an annuloplasty device comprising an inner axial support structure and outer tissue sheath which may be autologous or pericardial tissue.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-10,12-16,29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell US PN 6,102,945 in view of Northrup, III US PN 5,709,695.

Campbell discloses in Figure 3 an annuloplasty band comprising a ring of material 122 having both external (cloth covering) and metallic internal 26 axial support structures. Figures 4-5 show opposed ends of segment 112, which is flexible and capable of allowing connection between the opposed ends.

Regarding claim 13, lines 1-20 describe an axial structure of suture material.

Campbell describes the ring of material 122 as biocompatible and flexible silicone, but lacks the express written disclosure of using tissue for the ring. Northrup, III teaches in figures 6-7, lines 10-16 of col. 6, and lines 15-20 of col. 7 that it is well known to use natural tissue such as pericardial or autologous tissue for annuloplasty ring sheaths because of biocompatibility and mechanical properties.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the annuloplasty band disclosed by Campbell by using autologous or pericardial tissue, as taught by Northrup, III, as a replacement for silicone in order to provide a more biocompatible, durable, and lower profiled annuloplasty band.

8. Claims 11 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell US PN 6,102,945 in view of Northrup, III US PN 5,709,695, as applied to claims 1 and 4-8 above, and further in view of Loch et al. US PN 6,174,332.

Regarding claim 11, the device disclosed by Campbell as modified by Northrup, III lacks the express written disclosure of utilizing plastic for the internal support member (26, Fig 3 of Campbell). With regard to claim 28, the device disclosed by Campbell as modified by Northrup, III lacks the express written disclosure of utilizing adhesive for the graft tissue. Loch et al. teaches in lines 38-52 of col. 3 annuloplasty bands having either plastic or metal structural supports and adhesives to prevent fraying and maintain the integrity of the structure.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the annuloplasty band disclosed by Campbell, as modified by Northrup, III, by selecting plastic and using adhesive as taught by Loch et al. in order to provide structural support and prevent fraying.

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9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell US PN 6,102,945 in view of Northrup, III US PN 5,709,695, as applied to claims 1,4,14-16 above, and further in view of Sherman et al. US PN 5,891,159.

Campbell as modified by Northrup, III teaches the structure of claim 17 (as well as suturing the device to the annulus) but lacks the express written disclosure of the external support comprising purse string sutures. Sherman et al. teaches in lines 13-19 of col. 1 that it is well known in the art of cardiac surgery to use purse string sutures to attach devices to circular shapes.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Campbell, as modified by Northrup, III, by using purse string sutures as taught by Sherman et al. to attach the annuloplasty band to the annulus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Matthews (Howie) whose telephone number is 703-305-0316. The examiner can normally be reached on Tue-Fri 8:00-6:30 (Every Monday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine M. McDermott can be reached on 703-308-2111. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.



WHM

April 30, 2004



CORRINE McDERMOTT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700